



(In)Accuracy of Speech

Advisor: **Martin Wistauder**

Motivation

In comparison to humans, Small & Large Language Models perform exceptionally well for tasks such as information retrieval from large datasets. Language Models are able to capture syntax and semantics. Humans subconsciously track conversation context. In contrast, developers cater context to LLMs.

The performance of retrieving information is dependent on the input prompt. The input prompt contains contextual information implying the desired result. This work's goal is to investigate the loss of functionality when feeding worse and worse inputs to a LLM.

Goals and Tasks

-  Get familiar with the capabilities and limits of LLMs (see promptingguide.ai).
-  Implement a LLM application and find/create algorithms to judge text quality.
-  Evaluate the LLM output while decreasing input quality in various ways.
-  Reason about the benign and malignant implications of good/poor text quality for LLM-powered applications.

Literature

Courses & Deliverables

- ☒ **Introduction to Scientific Working**
 - Short report on background
 - Short presentation
- ☒ **Bachelor Project**
 - Project code and documentation
- ☒ **Bachelor's Thesis**
 - Project code
 - Thesis
 - Final presentation

Recommended if you're studying

- ☒ CS ☒ ICE ☒ SEM

Prerequisites

- > Basic knowledge of natural language
- > Programming (Python)

Advisor Contact

martin.wistauder@tugraz.at